UNITED STATES PATENT APPLICATION

FOR

Method and System for Attracting Visits to Web Sites

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5   **Method and System for Attracting Visits to Web Sites**

CROSS-REFERENCE TO RELATED APPLICATION

This application is related to pending U.S. patent applications No.:
09/375,476 and 60/096,884, filed respectively on August 17, 1998 and

10   August 16, 1999, each of which is assigned to the same assignee as the
present application and are hereby incorporated by reference.

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention is related to the area of Internet browser

15   applications and more particularly related to a method and system for
attracting users to visit to web pages/sites when browsing to other sites.

Background of the Related Art

In the field of Internet browsing, the popularity of web sites may vary
significantly. Most web sites, however, do share the common interest to

20   increase their number of visits (hits). By increasing their number of visits, the
web site are able to potentially charge higher rates for posting advertisements
on their web sites. In addition, if a web site is offering products for sell, a
more popular web site is likely to be able to sell more products.

Nevertheless, becoming a popular web site is difficult. Attracting first

25   time visitors presents the challenge of initially informing the potential visitors
of the web site's presence. Prior techniques for attracting visits to web sites
include simply presenting advertisements for a web site on television or on the
radio or in magazines/newspapers. However, advertising a web site through
the media may not be effective because the potential web visitor may not

30   remember to visit the advertised web site the next time they are browsing the

5   Internet. Alternatively, the potential web visitor may not remember the
address of the advertised web site the next time they are browsing the Internet.

     As a result, there is a need for a improved technique of attracting visits to
web sites by presenting links to the web sites to be visited at a more effective
time and place, which is more likely to produce increased visits to a web site.
10   In addition, there is a further need to present the links of the web sites to be
visited in fashion that is more likely to appeal to the curiosity of the potential
web site visitors, in order to potentially increase the likelihood of a visit to the
web site.

SUMMARY OF THE INVENTION

A method and system of facilitating access to web sites is described. In one embodiment, the method as performed by the system includes providing a first three-dimensional (3D) module interface to receive requests for Web pages. In response to receiving a request for a first Web page, displaying a second 3D module interface including a set of links to a plurality of separate Web pages. Each link of the plurality of Web pages includes a representation of a number visits to each of said separate Web pages.

In one embodiment, the representation of the number of visits to a Web page includes a graphical representation. In addition, in one embodiment, displaying the second 3D module interface including the set of links to the plurality of separate Web pages includes scrolling the second 3D module interface across a display of a client computer.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention will be readily understood by the following detailed description in conjunction with the accompanying drawings, wherein like reference numerals designate like structural elements, and in which:

Figure 1 shows a schematic configuration in which the present invention may be practiced;

Figure 2A shows an exemplary 3D viewing environment that may be used to practice present invention;

Figure 2B shows a top view of a 3D viewing environment including a plurality of walls or display areas;

Figure 2C shows an example of a perspective in a 3D viewing environment that includes a conventional web display, a stream video, an email icon, a chat bar, and advertisement contexts and, each can function independently;

Figure 3 is a flow diagram describing the steps of attracting visits to web sites in accordance with one embodiment;

Figure 4 illustrates the accumulation of hits/visits for a plurality of web sites;

Figure 5 illustrates an example of a three-dimensional module interface having a set of links to a plurality of web pages/sites, according to one embodiment; and

Figure 6 illustrates an example of a server include a first unit of logic to attract visits to web sites in accordance with one embodiment.

DETAILED DESCRIPTION

In the following detailed description of the present invention, numerous specific details are set forth in order to provide a through understanding of the present invention. However, it will become obvious to those skilled in the art that the present invention may be practiced without these specific details. In other instances, well known methods, procedures, components, and circuitry have not been described in detail to avoid unnecessarily obscuring aspects of the present invention.

The detailed description of the present invention is presented largely in terms of procedures, steps, logic blocks, processing, and other symbolic representations that directly or indirectly resemble the operations of data processing devices coupled to networks. These process descriptions and representations are typically used by those experienced or skilled in the art to most effectively convey the substance of their work to others skilled in the art.

The method along with the system to be described in detail below is a self-consistent sequence of processes leading to one or more desired results. It proves convenient at times, principally for reasons of common usage, to refer to data as messages, requests, values, elements, symbols, terms, numbers, or the like. It should be borne in mind that all of these similar terms are to be associated with the appropriate physical quantities and are merely convenient labels applied to these quantities.

Referring now to the drawings, in which like numerals refer to like parts throughout the several views. **Figure 1** shows a system configuration **100** in which one embodiment may be practiced. Data network **102** is a landline network that may be the Internet, the Intranet and a data network of other private and public networks.

Coupled to network **100** are a client computer **104**, an application

server **104** and a portal server **108**. Client computer **104** representing one

of numerous devices coupled to network **102** may include, but not be

limited to, a personal computer and a wireless mobile device. Typically,

client computer **104** is operated by a user who desires to communicate

with other devices over network **102**.

According to one embodiment, client computer **104** is loaded with

an application or program that is herein referred to as a 3D viewing

environment module or simply 3D browser. The detailed description of

the 3D browser is provided in the reference 09/375,476. When the

program is executed in a processor of client computer **104**, the 3D browser

provides an interactive 3D viewing environment or a 3D overlay for the

user to browse various resources in network **100**.

Referring now to **Figure 2A**, there is shown an exemplary 3D

viewing environment **200** displayed by a 3D browser. Walls or display

areas **202-210** are applicable for respectively displaying network

resources. Specifically, each of the walls may be perceived as an

independently operable conventional web browser, such as Netscape

Communicator and Internet Explorer.

As used herein, a display, a screen display, a displayed web page,

or a displayed window is an image presented on a display screen which is

a physical display apparatus in a device, such as a CRT or LCD monitor

commonly seen with a personal computer. For example, a file that

constitutes a display may be an HTML file. An image or a display thereof

appears on a display screen when the file is read by a browser.

In addition to the walls **202-210**, there are various applications

211-213 in 3D viewing environment **200**. These applications may include,

but not be limited to, email, alert, and chat, preferably represented as a 3D

icon that could be changed from different viewing angles as a user navigates in 3D viewing environment **200**.

Figure 2B illustrates a top view of a 3D viewing environment **220** that includes walls **222-231**. In one embodiment, a user is graphically situated at **234** looking at wall **222** and can at any time move to any other wall or walls as desired. One of the advantages provided by a 3D viewing environment is to permit a user to navigate therein from one wall to another, just like walking in a museum or shopping wall setting.

Figure 2C shows an example of a perspective **240** in a 3D viewing environment that includes a conventional web display **242**, a stream video **244**, an email icon **246**, a chat bar **248**, and advertisement contexts **250** and **252**, each functioning independently. For example, stream video **244** is playing while chat bar **248** is active and email icon **246** receiving mails without obscuring each other. As noted, advertisement contexts **252** is partially shown and may be shown completely when the user navigates/scrolls towards the right of the screen, which may cause display **242** and chat bar **248** to become partially shown at left.

Referring now back to **Figure 1**, application server **106** is one of many servers on network **100** that supports one or more web sites and provides interactive resources to be displayed at the client computer (e.g., the 3D viewing environment of **Figures 2A-2C**). Consider the example of the application server **106** supporting a web site for a shopping mall. Rather than showing a number of static hyperlinks or icons, each representing a store in the mall as typically seen from the conventional web browser, the shopping mall is electronically structured for the 3D viewing environment. In such an example, each of the store fronts may be shown as one of the walls or 3D icons that permit users to "walk" in and browse in the store.

Portal server **108**, as shown in the data network, may support a web search engine for the client computers, or related portal services, such as, news, white and yellow pages directories, free e-mail, discussion groups, online shopping and other types of links to separate web sites. In one embodiment of the present invention, the portal server **108**, provides to the client computers a 3D viewing environment/ module interface, as discussed above.

Figure 3 illustrates a flow diagram describing the steps of attracting visits according to one embodiment. It should be noted that the steps in **Figure 3** do not inherently indicate any particular order nor imply any limitations in the present invention. In step **302**, a portal server receives an input from a client computer coupled to the portal server via the Internet, or alternatively via an intranet connection.

The input received is interpreted to be a request to interconnect the client computer with a designated web page/web site, typically hosted by a separate application server. The designated web page selected by the client computer may be selected from a list of links displayed via a browser on the client computer, as provided by the portal sever, or may be input by a user at the client computer (e.g., a Universal Resource Locator).

In **step 304**, in response to the request from the client computer for the selected web page, the portal server initiates navigating to retrieve the selected web page. In one embodiment, in addition to navigating to retrieve the selected web page, in step **306**, the portal sever provides to the client computer a 3D module interface that is displayed at the client computer via a 3D browser at the client computer.

More specifically, in one embodiment the portal sever further provides to the client computer a set of links to a plurality of separate Web pages or sites (pages and sites are used interchangeably hereafter). The links are displayed within the 3D module interface, as displayed at the

client computer. In one embodiment, the 3D module interface is displayed at the client computer during the time period that elapses while the portal server is retrieving the web page previously selected by the client computer.

In an alternative embodiment, the set of links to the plurality of separate web pages as displayed in the 3D module may be dynamically selected by the portal server each time it retrieves a web page as requested by a user at a client computer. Moreover, the set of links to the plurality of separate web pages may correspond to a subject matter related to the web page requested by a user at the client computer.

In one embodiment, at least some of the plurality of links to separate web pages embedded in the 3D module include a representation of a number of visits to the respective web pages. For example, the representation may be a numerical representation indicating the number of visits to the respective web page within a recent pre-designated period of time (e.g., hour, day, week, month.) Alternatively, the representation of the number of visits may be a rating on a scale (e.g., 1-10). The rating could be a scale relative to other links to web pages as included in the 3D module interface. Further, the representation of the number of visits to a group of web pages may be from a group of paid subscribers to the host of the portal server for showing the popularity of the respective web pages in a hope to further attract more visits thereto.

In one embodiment, the number of visits corresponding to the respective web pages to be represented in the 3D module interface may be accumulated and maintained at the portal server, or alternative at a separate server. For example, as shown in **Figure 4**, the number of hits/visits for the respective web sites, as designated by their domain names, may be accumulated and stored on a server every time a request is made to visit a respective web site.

In addition, the representation of the number of visits to the respective web pages may be shown as a graphical representation. The graphical representation could have a graphical correlation to the web page, to which the graphical representation corresponds.

In one embodiment, the 3D module is scrolled across the screen of the client computer (horizontally or vertically), in an evolving manner. For example, the scrolling 3D module may appear on the display of the client computer as a scene in a window from a moving car. In a further example, as illustrated in **Figure 5,** the 3D module could represent a revolving globe with respective links to the plurality of web sites provided as dots on continents. Beams could be shown as trickling feeding to the dot/links, the density thereof representing the popularity of the respective sites (i.e., the number of times/frequency that the respective site has been visited). As a result, the popularity representation may attract visits to those dots/links.

In addition, the set of links to the plurality of separate web pages may be posted within the 3D module as a result of paying a fee (e.g., a subscription to the portal server). For example, in one embodiment, the greater the payment to post a link within the 3D module, the earlier within the 3D module interface the respective link may be displayed.

In one embodiment, the duration for displaying the 3D module interface which includes the links to the plurality of web pages could be extended beyond the time period it takes the portal server to retrieve the selected web page. In such an embodiment, the 3D module including the links to the plurality of web pages would continue to be displayed at the client computer for an extended period time in place of the web page previously selected by a user at the client computer.

In step **308**, it is determined if a user at the client computer (where the 3D module is displayed) has selected/highlighted a link displayed in

the interface. If the user has selected a link in the 3D module interface, in step **310** the portal server initiates navigating to retrieve the selected web page. In one embodiment, the recently selected web page could be retrieved and displayed at the client computer in place of the previously selected web page. Alternatively, the recently selected web page could be retrieved and displayed at the client computer concurrently with the previously selected web page.

In step **312**, in further response to a user at the client computer selecting one of the links to the plurality of web pages, the portal server increments a count of visits to the respective web site. In one embodiment, the count can be stored locally at the portal server, or alternatively remotely at a separate server, as previously discussed.

In step **314**, if none of the links to the plurality of web pages in the 3D module have been selected while the portal server has navigated to retrieve the previously selected web page, the portal server proceeds to retrieve and display the originally selected web page.

The method for attracting visits to web sites/web pages, as described above, can be stored in memory of the portal server, as a set of instructions to be executed, as shown by way of example in **Figure 6**. The server as shown in **Figure 6**, includes a server module having a Domain name manager, a log file manager, along with the logic to attract visits to Web sites, as previously mentioned. The domain manager manages a list of domains (names of web sites) along with a number of visits to each of the web sites for a predefined period. Log file manager determines if a request received from the network will cause a new entry to the list in the domain manager and provide necessary statistic data representing the popularity of the sites in the list to a terminal device that sent the request. For example, a request received from a terminal device is for www.xyzcorp.com, log file manager first check with the domain list in

the domain manager to see if www.xyzcorp.com is being statistically measured with respect to the number of visits to the site. If it is found that www.xyzcorp.com is not in the list, the name may be added into the list so that the popularity thereof can be measured. If www.xyzcorp.com is in the list, the domain manager may be caused to increment its measurement on the particular site. Alternatively, the log file manager is used to control a list of certain sites, preferably paid for by the respective owner thereof, that the popularity of these sites should be always measured and displayed whenever there is an opportunity to display such information to a terminal device, hence potentially increasing the number of hits to these sites in the paid list. In addition, there are a processor, storage, and a port to interconnect the server with a data network, such as the Internet.

In addition, the instructions to perform the method of attracting visits to Web sites, as described above could alternatively be stored on other forms of machine-readable medium, including magnetic and optical disks. For example, method of the present invention can be stored on machine-readable mediums, such as magnetic disks or optical disks, that are accessible via a disk drive (or computer-readable medium drive). Further, the instructions can be downloaded into a computing device over a data network in a form of compiled and linked version.

Alternatively, the logic to perform the methods as discussed above, could be implemented in additional computer and/or machine readable mediums, such as discrete hardware components such as large-scale integrated circuits (LSI's), application-specific integrated circuits (ASIC's), firmware such as electrically erasable programmable read-only memory (EEPROM's); and, electrical, optical, acoustical or other forms of propagated signals (e.g., carrier waves, infrared signals, digital signals, etc.); etc.

The present invention has been described in sufficient detail with a certain degree of particularity. It is understood to those skilled in the art that the present disclosure of embodiments has been made by way of examples only and that numerous changes in the arrangement and combination of parts may be resorted without departing from the spirit and scope of the invention as claimed. Accordingly, the scope of the present invention is defined by the appended claims rather than the forgoing description of embodiments.